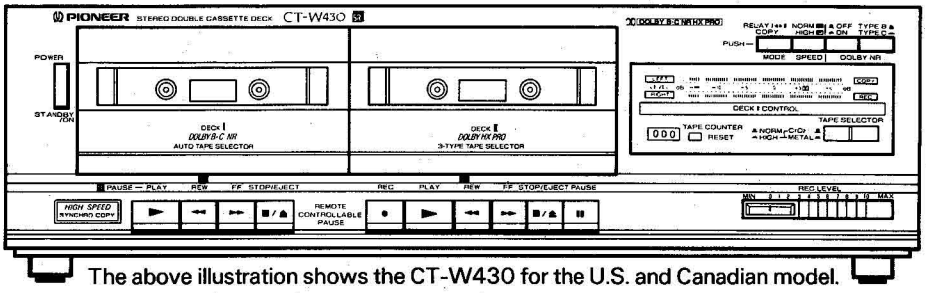
Operating Instructions

STEREO DOUBLE CASSETTE DECK

CT-W430
CT-W330



The above illustration shows the CT-W430 for the U.S. and Canadian model.

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your unit properly. After you have finished reading the instructions, keep the manual in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may differ from that shown in the drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

[Pour le modèle Canadien]

L'interférence, radioélectrique générée par cet appareil numérique de type B ne dépasse pas les limites énoncées dans le Règlement sur les perturbations radioélectriques, section appareil numérique, du Ministère des Communications.

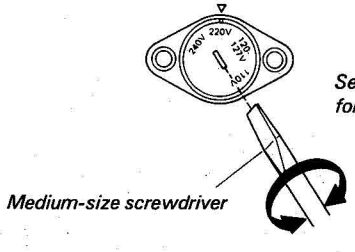
LINE VOLTAGE SELECTOR SWITCH

Only multi-voltage models are provided with this switch. U.S., Canadian, European, U.K., and Australian models are not provided with this switch.

Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.

The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Disconnect the power cord.
2. Insert a medium-size screwdriver into the groove on the voltage selector.
3. Adjust so that the tip of the arrow points to the voltage value of your area.



Set the voltage selector for the voltage in your area.

Medium-size screwdriver

"This product complies with the Radio Interference requirements of the EC (European Community) Directive 87/308/EEC."

PIONEER®
The future of sound and vision.

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

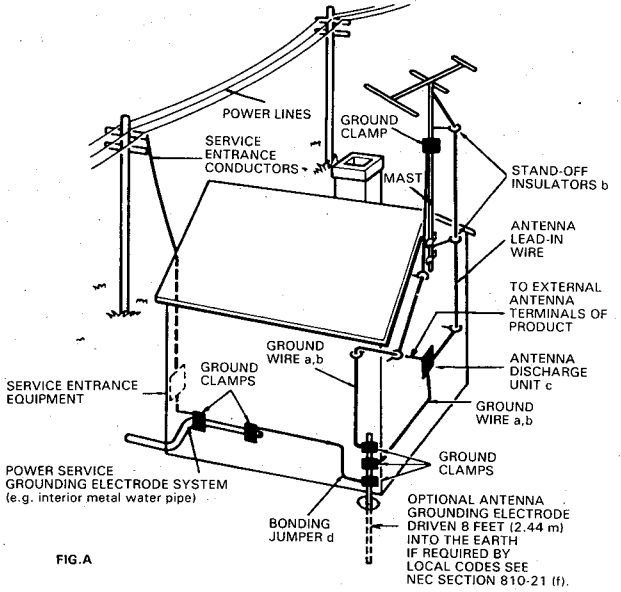
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Neither wire is to be connected to the earth terminal of a three pin plug.
Equipment sold in the U.K. is not supplied with a power plug.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.
RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.
HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.
FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.
WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
LOCATION — The appliance should be installed in a stable location.
WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.
VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.
NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:
- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.


POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
ANTENNA DISCHARGE UNIT c
GROUND WIRE a,b
GROUND CLAMPS
SERVICE ENTRANCE EQUIPMENT
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
BONDING JUMPER d
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).
FIG.A

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.
CART — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

a) Use No.10 AWG (5.3 mm^2) copper, No.8 AWG (8.4 mm^2) aluminum, No.17 AWG (1.0 mm^2) copper-clad steel, bronze wire, or larger as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

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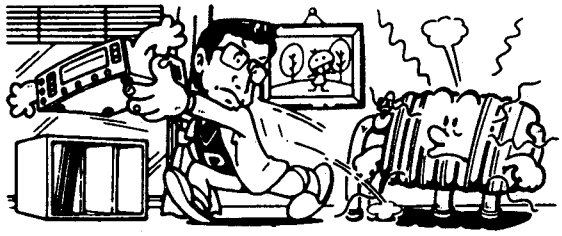
PRECAUTIONS FOR INSTALLATION

HEAT

Do not place the unit near a heating device, on top of the amplifier or in a location where it is exposed to direct sunlight, as excessive heat may damage the finish and internal parts. Also, do not place a cloth on top of the unit or block the provided ventilation openings in any other way. Always make sure that the installation location provides sufficient ventilation to prevent overheating.



HUMIDITY CONTAMINATION

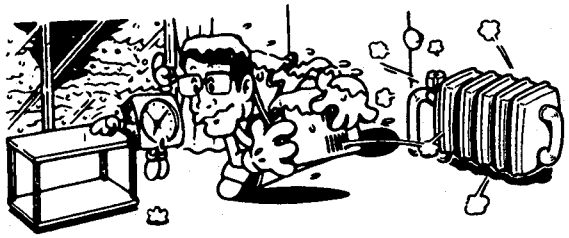
Do not install the unit in an excessively humid or dusty location, as this may cause malfunctions and breakdowns. Also, avoid placing the unit next to kitchen counters or other locations subject to oily fumes.

NOISE INTERFERENCE

When the unit is placed directly on top of the amplifier it may pick up humming or other noise during recording. A turned-on TV set in close vicinity may also cause noise.

DEW CONDENSATION

When the unit is moved from a cold to a warm environment, or when the room temperature rises suddenly, condensation forms on parts of the tape transport mechanism, causing malfunctions if the tape deck is operated immediately. To avoid this, allow the tape deck to acclimate to the new temperature by waiting about one hour before operating the unit.



POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

CONNECTIONS

- Read through the operating instructions of the stereo components which you intend to connect to this unit.
- Turn on the power only after all the connections are completed.
- Make sure that the plugs are inserted securely. Improper connection may generate noise.

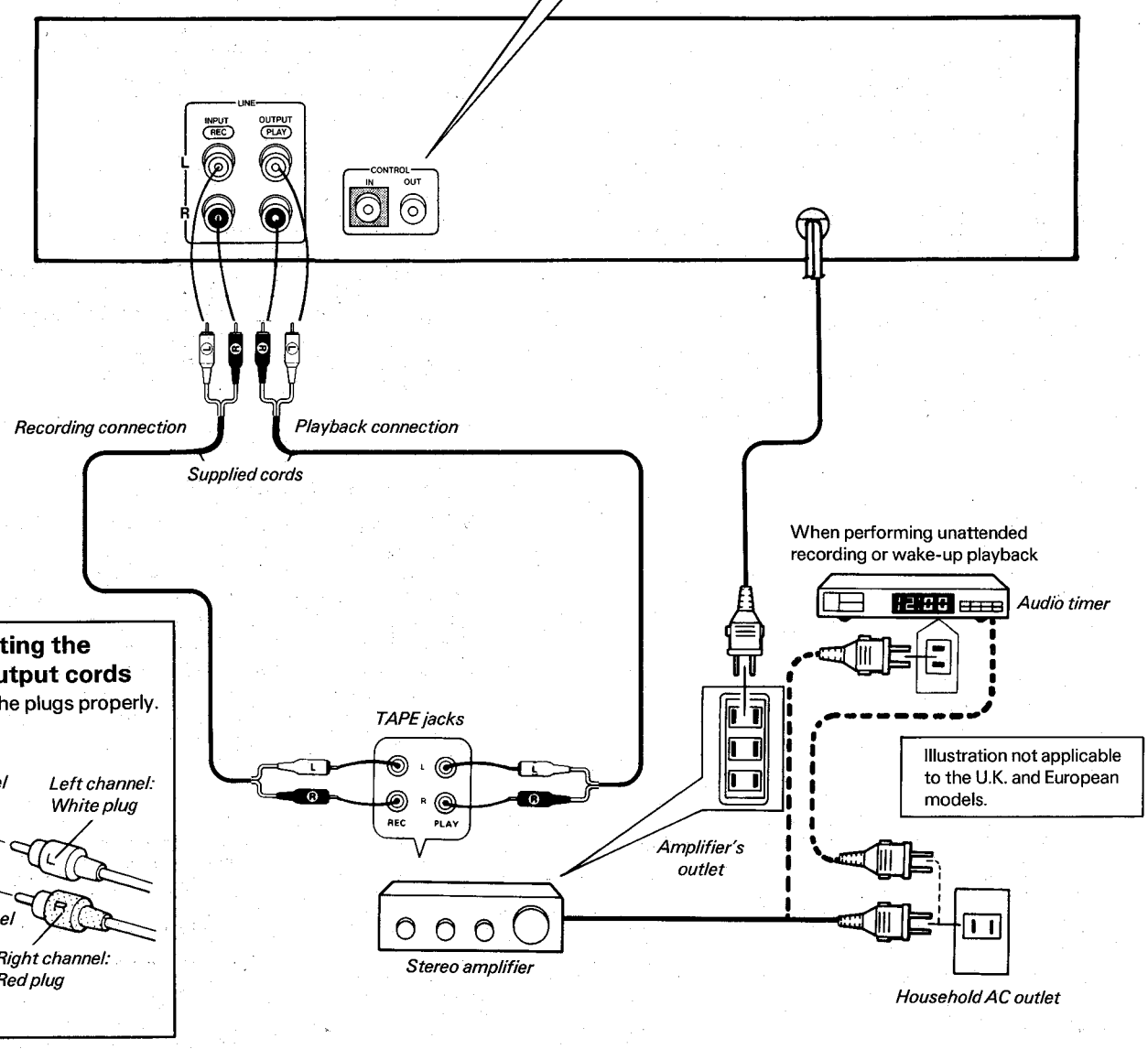
(For U.S. and Canadian models.)

CONTROL IN jack

Connect the jack to CONTROL OUT jack of a component equipped with the Pioneer System Remote Control (bearing the SR mark) using the supplied Remote control cord, and you will be able to operate the PAUSE function of this component using the system remote control.

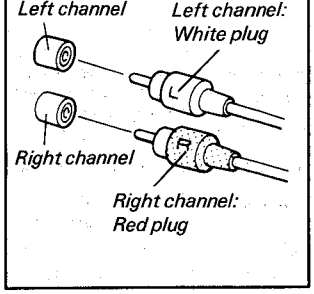
CONTROL OUT jack

Intermediary output of remote control signals from the above input jack. Connect it to CONTROL IN jack of another component compatible with the Pioneer System Remote Control.



Connecting the input/output cords

Connect the plugs properly.



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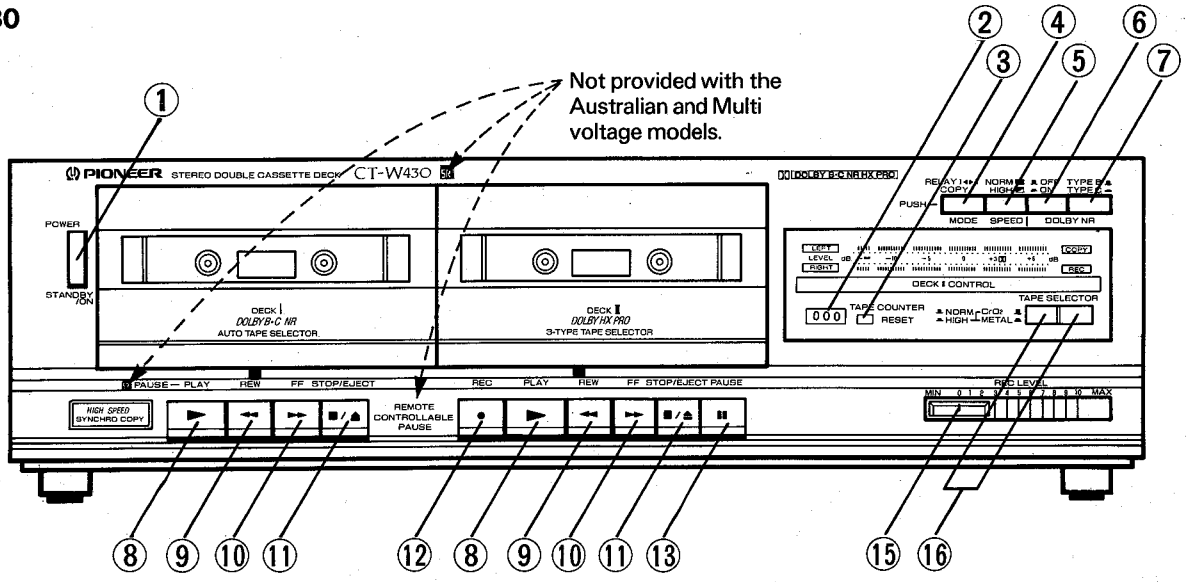
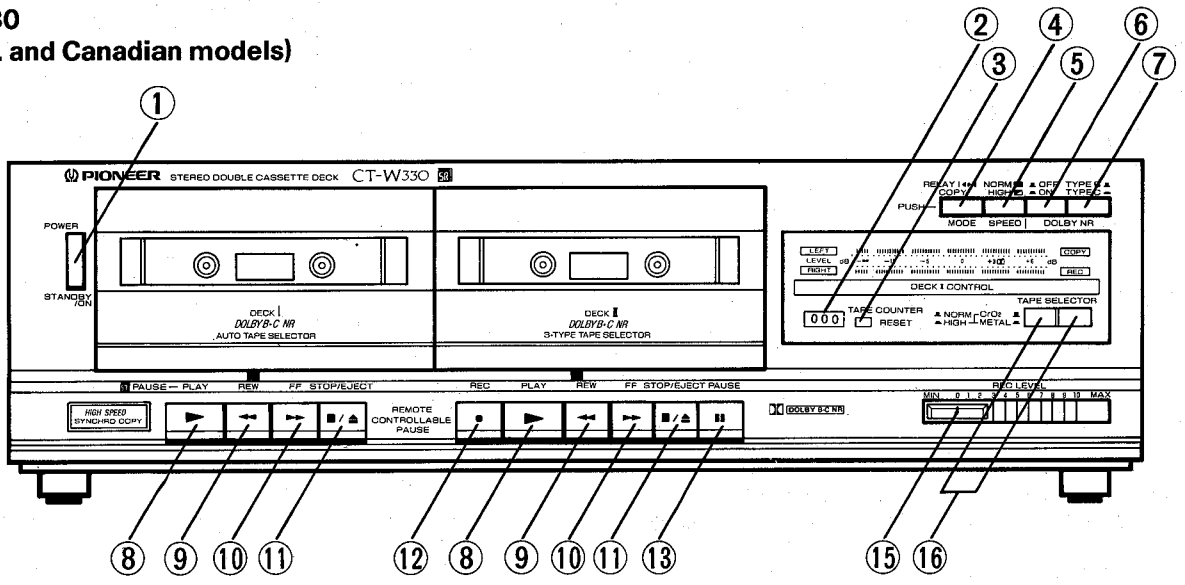
FRONT PANEL FACILITIES

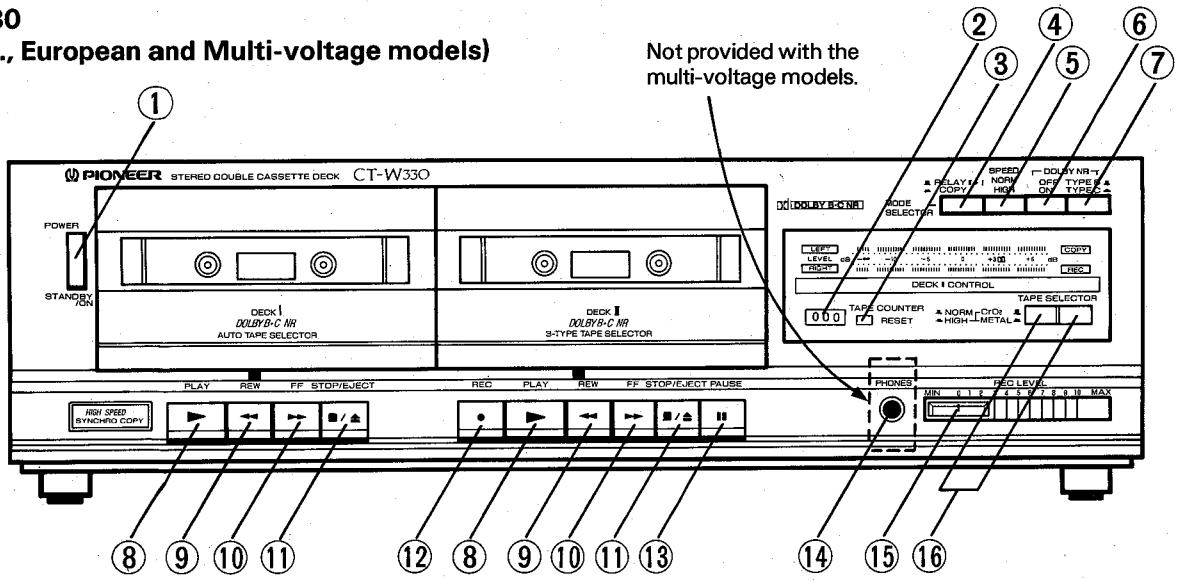
CT-W430


Not provided with the Australian and Multi voltage models.
PIONEER STEREO DOUBLE CASSETTE DECK CT-W430
POWER
STANDBY /ON
DECK I DOLBY B-C NR AUTO TAPE SELECTOR
DECK II DOLBY HX PRO 3-TYPE TAPE SELECTOR
PAUSE PLAY REW FF STOP/EJECT
REMOTE CONTROLLABLE PAUSE
REC PLAY REW FF STOP/EJECT PAUSE
HIGH SPEED SYNCHRO COPY
DOLBY B-C NR HX PRO
MODE SPEED DOLBY NR
DECK I CONTROL
TAPE COUNTER RESET
TAPE SELECTOR
REC LEVEL
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CT-W330
(For U.S. and Canadian models)


PIONEER STEREO DOUBLE CASSETTE DECK CT-W330
POWER
STANDBY /ON
DECK I DOLBY B-C NR AUTO TAPE SELECTOR
DECK II DOLBY B-C NR 3-TYPE TAPE SELECTOR
PAUSE PLAY REW FF STOP/EJECT
REMOTE CONTROLLABLE PAUSE
REC PLAY REW FF STOP/EJECT PAUSE
HIGH SPEED SYNCHRO COPY
DOLBY B-C NR
MODE SPEED DOLBY NR
DECK I CONTROL
TAPE COUNTER RESET
TAPE SELECTOR
REC LEVEL
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CT-W330
(For U.K., European and Multi-voltage models)


Not provided with the multi-voltage models.
PIONEER STEREO DOUBLE CASSETTE DECK CT-W330
POWER
STANDBY /ON
DECK I DOLBY B-C NR AUTO TAPE SELECTOR
DECK II DOLBY B-C NR 3-TYPE TAPE SELECTOR
PLAY REW FF STOP/EJECT
REC PLAY REW FF STOP/EJECT PAUSE
HIGH SPEED SYNCHRO COPY
DOLBY B-C NR
MODE SELECTOR
SPEED
DOLBY NR
DECK I CONTROL
TAPE COUNTER RESET
TAPE SELECTOR
PHONES
REC LEVEL
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

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E

FRONT PANEL FACILITIES

① **POWER (STANDBY/ON) switch**

NOTE:

- *The unit POWER switch is geared to selecting the transformer secondary, and so even at the STANDBY position the unit circuitry will work as long as the power cord is connected to a power outlet.*
- *For CT-W430, CT-W330 U.S. and Canadian models: when turning on the power, the unit will be inoperative for about 3 seconds.*

② **TAPE COUNTER (DECK II only)**

Indicates the transport position of the tape loaded in DECK II only.

③ **COUNTER RESET button**

Resets the tape counter reading to "000".

For CT-W430. For CT-W330 (U.S. and Canadian models)

④ **MODE switch (RELAY I◀ ▶II/COPY)**

(Non-locking switch)

Use this switch for the following operations:

RELAY I◀ ▶ II:

This position is used for relay playback. The unit is set to relay playback mode when the COPY indicator is not displayed. In this mode, relay playback from DECK I to DECK II or DECK II to DECK I is possible by pressing PLAY button of one deck and then PLAY button of the other deck. (See page 9.) For normal playback the unit must be set to relay mode.

NOTE:

When not performing tape copy, be sure to set MODE switch to RELAY I ◀ ▶ II position. If MODE switch is in COPY position, normal recording (of program from LINE INPUT terminal) will not be possible.

When MODE switch is in the COPY position, the only PLAY button of DECK I will not function unless DECK II is in the recording or recording standby status. When MODE switch is in RELAY I ◀ ▶ II position, relay play can be performed only from DECK II to DECK I. When MODE switch is in RELAY I ◀ ▶ II position, if PLAY or REC button of one deck is pressed, PLAY and REC (II only) buttons of the other deck will not function.

COPY:

In this mode, tape copying from DECK I to DECK II is possible. The unit is set to copy mode when the COPY indicator is displayed. DECK I is for playback and DECK II is for recording. (See page 10.)

⑤ **SPEED switch (NORM ■/HIGH ◩)**

NORM ■ Lights

HIGH ◩ Flashes

Press this switch to select the desired tape speed for copying. The COPY indicator flashes when high speed is selected. The indicator lights continuously when normal speed is selected.

For CT-W330 (U.K., European and Multi-voltage models)

④ **MODE switch (▬ RELAY II▶ I/ ▂ COPY)**

Use this switch for the following operations:

RELAY II▶ I:

This position is used for relay playback. The COPY indicator is not displayed when the unit is set to relay playback mode. In this mode, relay playback from DECK II to DECK I is possible by pressing PLAY button of DECK II and then PLAY button of DECK I. (See page 9.) For normal playback the unit must be set to relay mode.

COPY:

In this mode, tape copying from DECK I to DECK II is possible. The COPY indicator is displayed when the unit is set to copy mode. DECK I is for playback and DECK II is for recording. (See page 10.)

NOTE:

When not performing tape copy, be sure to set MODE switch to RELAY II ▶ I (▬) position. If MODE switch is in COPY (▂) position, normal recording (of program from LINE INPUT terminal) will not be possible.

When MODE switch is in the COPY (▂) position, the PLAY, Fast-Forward, and Rewind buttons of DECK I will not function unless DECK II is in the recording or recording standby status. When MODE switch is in RELAY II ▶ I (▬) position, relay play can be performed only from DECK II to DECK I. When MODE switch is in RELAY (▬) position, if PLAY button or REC button of DECK II is pressed, PLAY, Fast-Forward, and Rewind buttons of DECK I will not function.

⑤ **SPEED switch (▬ NORM/ ▂ HIGH)**

Use this switch for the following operations.

NORM (▬):

Tapes are copied at the normal speed.

HIGH (▂):

Pressing this switch will cause high-speed copying.

⑥ **DOLBY* NR switch (▬ OFF/ ▂ ON)**

Press this swich to ON (▂) for recording with one of the built-in Dolby NR Systems and for playback of tapes which have been recorded using a Dolby NR Systems. For other tapes, do not press this switch.

*

For CT-W430

- *Dolby noise reduction and HX PRO headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX PRO originated by Bang & Olufsen.*
- *"Dolby", the double-D symbol ◻◻ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.*

*

For CT-W330

- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"Dolby", and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.*

⑦ **DOLBY NR switch (TYPE ▬ B/ ▬ C)**
After DOLBY NR switch (ON/OFF) is pressed, select B-TYPE or C-TYPE using this switch.

NOTE:
When playing back Dolby NR-encoded tapes, always set this switch to the same position (B-type or C-type) used for recording.

⑧ **PLAY button (▶)**
When this button is pressed, the side of the tape facing outward (side A or B) will play.

⑨ **REW button (◀◀)**
To rewind the tape in the direction of the arrows. This winds the tape onto the left reel of the cassette.
Press STOP/EJECT button when the top of the tape is reached. The auto stop function does not operate when the tape is wound by rewinding.

⑩ **FF button (▶▶)**
To fast-forward the tape in the direction of the arrows. This winds the tape onto the right reel of the cassette.
Press STOP/EJECT button when the end of the tape is reached. The auto stop function does not operate when the tape is wound by fast forwarding.

⑪ **STOP/EJECT (■/≙) button**
The cassette compartment door will open when this button is pressed while the tape is stopped. Pressing it while the tape is running will stop the tape.

⑫ **REC button (●)**
To start recording.
REC button cannot be depressed if a cassette with broken erasure prevention tabs is loaded, or if no cassette tape is loaded.

⑬ **PAUSE button (▮▮)**
Press to temporarily stop the tape transport during recording or playback. To restart the tape transport, press once again. The pause function does not operate when the deck is in the fast-forward or rewind mode.

⑭ **PHONES jack**
Connect the plug of stereo headphones.
This jack is provided only on the CT-W330 (For U.K., European models).

⑮ **REC LEVEL control**
Recording level control.

⑯ **TAPE SELECTOR switches (DECK II only)**
This selector allows the bias and equalizer characteristics to be selected during recording, and equalizer characteristics during playback, to conform with the type of tape you are using on DECK II.

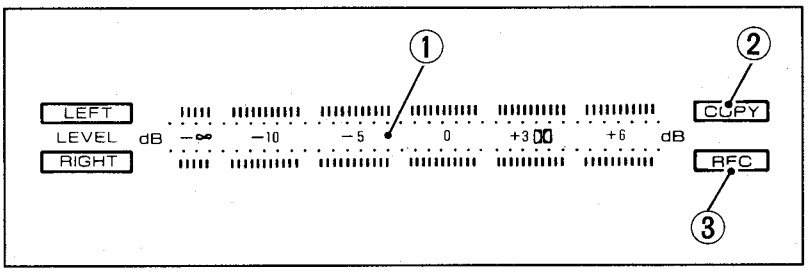
Normal tape:
Release the left switch (▬ NORM).

CrO_2 tape:
Press the left switch (▬ HIGH) and release the right switch (▬ CrO_2).

Metal tape:
Press both the right and left switches (▬ HIGH, ▬ METAL).

NOTE:
DECK I is provided with an automatic tape selector mechanism.

OPERATING DISPLAY



① **Level Meter**
The ▯▯ beside the +3 dB mark indicates the reference level for the Dolby NR systems.

For CT-W430.
For CT-W330 (U.S. and Canadian models)

② **COPY indicator:**
This indicator lights in the copying mode.

Normal speed: lights up
High speed: flashes

For CT-W330
(U.K., European and Multi-voltage models)

② **COPY indicator:**
This indicator lights in the copying mode.

③ **REC indicator:**
This indicator lights in the recording mode.

RECORDING

RECORDING (DECK II only)

Erasure prevention tabs

The REC button does not work when the erasure prevention tabs of a loaded cassette tape have been broken off (see page 12). Do not attempt to press REC button with unreasonable force.

1. **Set MODE switch ④ to RELAY position. (The [COPY] indicator is not displayed.)**
2. **Load the tape on which to record.**
3. **Set DOLBY NR switches ⑥, ⑦ and TAPE SELECTOR switches ⑯.**
4. **Prepare the program source which you intend to record. Operate the stereo amplifier and prepare it for playback of the desired song.**
5. **Press PAUSE button ⑬, followed by REC button ⑫ to place the deck in the recording standby mode.**
6. **Adjust the recording level. For details, refer to "ADJUSTING THE RECORDING LEVEL."**
7. **Press PAUSE button ⑬ to begin recording.**

For CT-W430.
For CT-W330 (U.S. and Canadian models)

REC indicator flashes during the recording standby mode.

ADJUSTING THE RECORDING LEVEL

The adjustment of the recording level is the most important factor in achieving good recording results. A high level is good for the signal-to-noise ratio and the dynamic range, but an excessively high level distorts the sound. If the level is set too low for fear of sound distortion, irritating tape hiss will mar the recording. Depending on the manufacturer and the type of tape, the characteristics of a tape may differ even when the same kind is used. Setting just near the maximum recording level for the tape type will optimize the tape characteristics and result in a high-quality recording.
Adjust REC LEVEL control ⑮ so that the level meter "0 dB" just lights. No harm will be done if the "+3 dB" indicator lights momentarily at peaks. (When using metal tapes, it is permissible for the "+6 dB" indicator to light momentarily.)

NOTE:

- *In reality, the optimum recording level may differ somewhat, depending on the music source and type of tape used. In order to obtain the best results possible for your tapes and to produce better recordings, set the recording level after actual testing, by listening carefully to the sound produced and adjusting it to a level most pleasing to you.*
- *The level meter may react differently during recording and playback of the same music tape. This is due to differences in tape sensitivity, and creates no problem so long as the variation is not severe.*

DOLBY NR SYSTEMS

This unit is equipped with two noise reduction systems (Dolby B-type NR and C-type NR).

Dolby NR Systems

The Dolby NR Systems are designed to reduce the amount of tape hiss, mainly in the treble components. During recording, the high-pitched pianissimo sounds which are most characteristic of audible noise are boosted, and during playback these boosted sections only are attenuated so that the tape sound is returned to normal. As a result, the noise is attenuated by an amount equivalent to the boosting in the treble range.
Dolby B-type NR serves to reduce noise in the treble range by cutting tape hiss and expanding the dynamic range. Dolby C-type NR is even more effective than Dolby B-type NR in reducing noise as it cuts the noise from the mid-range on.

NOTE:

When a tape has been recorded using Dolby B-type NR or C-type NR, make sure that the same DOLBY NR switch position is selected when it is played back.

Dolby HX PRO Headroom Extension System (For CT-W430)

The Dolby HX Pro system controls the bias current during recording and always keeps it at an optimum level according to the high-frequency components of the music signal. It therefore allows excellent recordings even of digital sources which contain a large amount of strong, high-frequency components. The Dolby HX Pro effect is obtained independently from the setting of the Dolby NR Systems (B, C or OFF). Furthermore, since the system is used only during recording, an improvement of sound can be achieved even if tapes recorded with Dolby HX Pro are played back with a deck, radio-cassette recorder or car stereo system not equipped with DOLBY HX PRO. To guarantee optimum recording results, the HX Pro system of this unit is automatically activated during recording.

PLAYBACK

SINGLE PLAYBACK (DECK I or DECK II)

1. Set MODE switch ④ to RELAY position.
(The COPY indicator is not displayed.)

2. Load a prerecorded tape in DECK I or II.

3. Set DOLBY NR switches ⑥, ⑦.

4. Set TAPE SELECTOR switches ⑯.
- Perform this setting only for playback on DECK II.
- For playback on DECK I, an auto tape selector is provided, hence there is no need to set TAPE SELECTOR switches.

5. Press PLAY button ⑧ of DECK I or II.

RELAY PLAYBACK (Continuous play DECK I ◀ ▶ DECK II) For CT-W430. For CT-W330 (U.S. and Canadian models)

When the tape loaded in DECK I reaches its end and stops, DECK II enters the playback mode. The same applies to relay playback from DECK II to DECK I.

1. Set MODE switch ④ to RELAY position.
(COPY indicator is not displayed.)

2. Load prerecorded tapes.
Load tapes in DECK I and II which have both been recorded with the same Dolby NR.

3. Set the Dolby NR switches ⑥, ⑦.

4. Set TAPE SELECTOR switches ⑯ (for playback on DECK II).

5. Press PLAY button for the deck which will playback first. Then press PLAY button of the other deck.
When the end of the first tape is reached, the corresponding deck stops and the other deck automatically starts playback.

RELAY PLAYBACK (Continuous play DECK II ▶ DECK I) For CT-W330 (U.K., European and Multi-voltage models)

Relay playback can be performed from DECK II to DECK I only. When the tape loaded in DECK II reaches its end and stops, DECK I enters the playback mode. Relay playback from DECK I to DECK II is not possible.

1. Set MODE switch ④ to RELAY position.
(COPY indicator is not displayed.)

NOTE:
Do not press MODE switch during relay playback. If mode switch is pressed during operation and set to COPY (▬), the relay playback mode will be cancelled.

2. Load prerecorded tapes.
Load tapes in DECK I and II which have both been recorded with the same Dolby NR.

3. Set Dolby NR switches ⑥, ⑦.

4. Set TAPE SELECTOR switches ⑯ (for playback on DECK II).

5. Press PLAY button ⑧ of DECK II first. Then press PLAY button of DECK I.
When the end of the tape in DECK II is reached, it will stop, and DECK I will automatically start playback. Relay playback from DECK I to DECK II is not possible.

AUTO-STOP MECHANISM (DECK I and DECK II)

- When the tape is fully wound onto one of the reels during recording or playback, the auto-stop mechanism will be activated without STOP/EJECT (■/ ⏏) button ⑪ having to be pressed, and the tape will automatically stop.
- When fast-forwarding or rewinding the tape with this unit, the auto-stop mechanism will not work. Therefore, make sure to press STOP/EJECT (■/ ⏏) button ⑪ when the tape has been fast-forwarded or rewound.

TAPE COPYING

[From DECK I to DECK II]

- The tape copying function permits you to copy the contents of a tape from DECK I to DECK II.
- SPEED switch (NORM/HIGH) ⑤ is used to select either normal speed copying (to listen to playback as a tape is being copied) or high speed copying (the tape is copied at twice the normal playback speed).

1. Load a prerecorded tape into DECK I and a blank tape into DECK II.

2. Set DOLBY NR switches ⑥, ⑦ to match the tape in DECK I, and TAPE SELECTOR switches ⑯ to match the tape in DECK II.

For CT-W330 (For U.K., European and Multi-voltage models)

3. Set MODE switch ④ to COPY (▬) position. (The COPY indicator is displayed.)

4. Set SPEED switch ⑤ to NORM (▬) or HIGH (▬) position.

For CT-W430. For CT-W330 (For U.S. and Canadian models)

(Non-locking switch)

3. Select the COPY mode using MODE switch ④.
(The COPY indicator is displayed.)

4. Select normal speed or high speed using SPEED switch ⑤.

NORM: COPY indicator lights.
HIGH: COPY indicator flashes.

NORM:
Tape copying at normal speed for listening to playback.

HIGH:
Tape copying at twice the normal speed.

NOTE:
DURING HIGH SPEED COPYING:
When performing high speed copying with this unit, if a television is on nearby, a high-pitched interference sound may be heard on the recording. In this case, either use the normal speed copying function, or turn off the television.

5. Press PLAY button ⑧ of DECK I.
Playback will not begin immediately, but the deck will enter the standby mode.

6. Press REC button ⑫ of DECK II.
At the same time that DECK II begins recording, DECK I will begin playback.

For CT-W430. For CT-W330 (For U.S. and Canadian models)

Synchronized copy start can also be accomplished by first pressing REC button ⑫ for DECK II and then PLAY button ⑧ for DECK I.

NOTE:
DURING TAPE COPYING:

- *When making more than one copy, be sure to leave the original tape in DECK I. Making a copy of a copy will result in lower sound quality.*
- *When making tape copies, adjustment of the recording level is not required.*
- *When copying tapes, be sure to use tapes of the same length.*
- *When copying tapes, the copy will be produced with the same noise reduction effects as those used on the original tape, regardless of the position of the noise reduction switches. For example, if the original tape was recorded with the Dolby C-type NR, the copy produced will have the same Dolby C-type NR effects.*
- *If a tape prerecorded at a high recording level is loaded in DECK I, and a blank tape with a low saturation level is loaded in DECK II for copying, the resulting sound may be distorted.*
- *The playback sound output from LINE OUTPUT terminals during copying is to enable you to check the COPY operation. Consequently, it may sometimes differ slightly from the original sound.*

For CT-W330 (For U.K., European and Multi-voltage models)

Do not change SPEED switch ⑤ position during tape copying.

For CT-W430. For CT-W330 (For U.S. and Canadian models)

- *If SPEED switch ⑤ is pressed while copying, the tape speed does not change.*
- *If PLAY button ⑧ of DECK II is pressed in the COPY mode, the COPY mode is cancelled, and DECK II is set to PLAY mode.*
- *COPY mode can be changed using MODE switch only when both decks are set to STOP mode (including FF and REW).*
  Copying SPEED can be changed only when in COPY mode.

TIMER RECORDING / PLAYBACK

UNATTENDED RECORDING (DECK II only)

1. **Set POWER switch ① to ON.**
2. **Load the tape on which to record.**
3. **Set DOLBY NR switches ⑥, ⑦ and TAPE SELECTOR switches ⑯.**
4. **Set MODE switch ④ to RELAY position.**
   (The COPY indicator is not displayed.)
5. **Tune in the desired station with your stereo tuner.**
6. **Press PAUSE button ⑬ followed by REC button ⑫ to set to the recording standby mode.**
7. **Adjust the recording level.**
8. **Set the audio timer.**
   When this is done, the audio timer will turn all connected components off.
9. **Release PAUSE button ⑬.**
   At the time set on the audio timer, the power will be turned on, and recording will begin automatically.

For CT-W430.
For CT-W330 (For U.S. and Canadian models)

When the unit is supplied with power, it takes about 3 seconds for the recording to start. During this time, the REC indicator flashes.

WAKE-UP PLAYBACK (DECK I and DECK II)

1. **Set POWER switch ① to ON.**
2. **Load a prerecorded tape.**
3. **Set DOLBY NR switches ⑥, ⑦.**
4. **Set TAPE SELECTOR switches ⑯.**
   Set when performing wake-up playback on DECK II.
5. **Set MODE switch ④ to RELAY position.**
   (The COPY indicator is not displayed)
6. **Press PLAY button ⑧.**
7. **Adjust the VOLUME control at the stereo amplifier.**
8. **Rewind the tape to the position where playback is to start.**
9. **Set the audio timer.**
   When this is done, the audio timer will turn all connected components off.
10. **Press PLAY button ⑧.**
    At the time set on the audio timer, the power will be turned on and playback will begin automatically.
    If tapes are loaded in both decks and both PLAY buttons are pressed, the unit will perform relay playback. (see page 9.)

Operations may vary depending on the audio timer used; be sure to consult the operating instructions for the audio timer you actually employ.

NOTE:
Do not set the timer for audio timer recording or playback 24 hours or more in advance.

For U.S. and Canadian models

PAUSE OPERATION WITH THE SR REMOTE CONTROL

When using this unit together with a Pioneer system component bearing the SR mark, the pause function can be activated with the remote control unit of that component. For remote control this unit must be connected to the system component with the supplied control cord. (Refer to CONNECTIONS on page 4 and the respective section in the operating instructions of the other component.)

- Pause operation by remote control is possible for either DECK I (playback) or DECK II (playback or recording). The operation is also possible when performing relay playback from DECK I to DECK II or from DECK II to DECK I. The deck currently operating will be set to PAUSE.
- When copying tapes (from DECK I to DECK II), only the PAUSE function of DECK II (RECORDING) can be operated by remote control.

HOW TO HANDLE CASSETTE TAPES

CHECK CASSETTE BEFORE USE

Bear in mind the following points before loading cassette tapes.

Is the tape loose, or is some of the tape outside the cassette?

If some of the tape is projecting outside the cassette shell or if it is loose, if may not enter between the capstan and pinch roller. This will prevent the tape from being supplied or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack (Fig. A.).
Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after using the cassette.

What are the accidental erasure prevention tabs for?

A cassette is provided with these tabs so that important recordings will not be erased accidentally.
When the tab on the cassette shell is broken off with the tip of a screwdriver (Fig. B), it will not be possible to activate the recording function even by pressing the recording (REC) button, so valuable recordings will not be erased accidentally.
To re-record over a cassette on which tabs have been broken off, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.
In case of metal tape or chrome tape, take sufficient care that the sensor holes (Fig. D, E, F) are not blocked.
When this hole is blocked, the automatic tape selector mechanism does not operate correctly.

NOTE:

- *The accidental erasure prevention tabs are located at the top left on both sides A and B (1 and 2), so that material on each side can be prevented from being erased in error.*

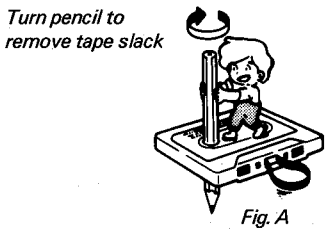


Fig. A

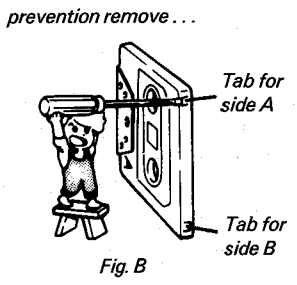


Fig. B

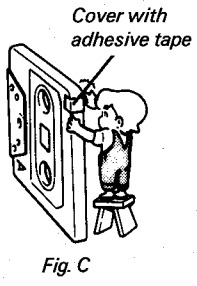


Fig. C

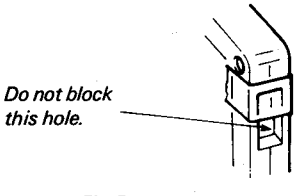


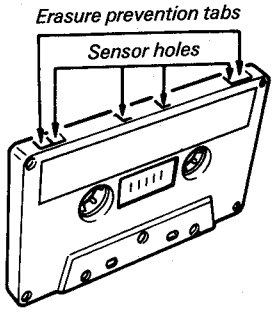
Fig. D

AUTOMATIC TAPE SELECTOR FUNCTION

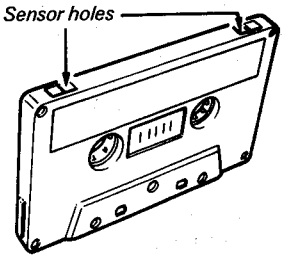
DECK I of this unit is equipped with an automatic tape selector function which utilizes the sensor holes on the tape cassette to determine the type of tape being used, in order to set the deck to match the tape recording bias and equalization.

REGARDING THE TAPE CASSETTE SENSOR HOLES

- Do not use FeCr tapes with this unit.
- When using metal tapes, be sure the tape cassettes have sensor holes.



Metal tape
Fig. E



CrO_2 tape
Fig. F

TIPS ON USING CASSETTE TAPES

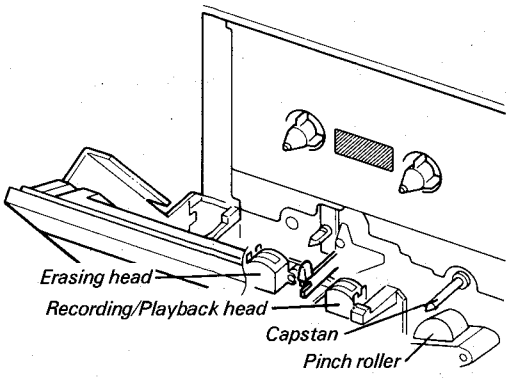
- Leader tape (which does not allow sound to be recorded on it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for about 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location free of magnetism, dust, dirt and oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit.

MAINTENANCE

CLEANING THE HEADS, PINCH ROLLERS AND CAPSTANS

The heads, pinch rollers and capstans are liable to get dirty quite easily. If the heads are dirty, the high-frequency components will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of the playback sound. It is therefore recommended that the head section be cleaned regularly (approx. every 10 hours of operation).

1. Press STOP/EJECT button and open the cassette door.
2. Dip the cleaning swab into the cleaning fluid and use it to wipe the heads, capstans and pinch rollers. At this time, be careful not to let the cleaning swab get caught in the mechanism.



NOTE:
Do not load a tape after cleaning the head section until the cleaning fluid has completely dried (two to three minutes).

DEMAGNETIZING THE HEADS

After using the cassette deck over a period of time, the heads will become magnetized. The same effect is also caused by bringing a screwdriver, magnet or other magnetized object too close to the heads. This causes loss of high-frequency sound during recording and playback, and also produces interference noise. The heads should be regularly demagnetized with a head demagnetizer (eraser), which can be purchased at dealer shops. When demagnetizing the heads, be sure that the cassette deck POWER switch is in STANDBY position. For detailed instructions, consult the operating manual for your head demagnetizer (eraser).

CLEANING THE FRONT PANEL SECTION

Wipe the front panel and the cassette door when dusty or greasy with a soft cloth containing a small amount of ordinary liquid soap. Then wipe dry with a cloth. Never use volatile spirits like thinners, benzine or alcohol because they will damage the panel finish.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
POWER		
Cannot turn power on.	• The power plug is removed. • The component (stereo amplifier, audio timer, etc.) to which the power cord is connected is off.	• Insert the power plug correctly. • Turn the stereo amplifier or audio timer on.
CASSETTE DOOR		
The door does not open.	The deck is not in stop mode (tape is moving).	Press STOP/EJECT (■/ ⏏) button.
The door does not close.	The cassette is not properly loaded.	Reinsert the cassette.
PLAYBACK		
Immediately stops.	The tape is completely wound.	Rewind the tape.
The level meter does not work.	• The tape is not recorded. • The tape head is dirty.	• Replace the tape with a recorded one. • Clean the head (see page 13).
No sound	• The amplifier input selector is not correctly set. • The amplifier volume level setting is too low. • Connection problems (wrong connection, cord removed, poor contact, broken wire).	• Set the amplifier input selector correctly. • Turn the amplifier volume control up. • Connect securely.
RECORDING		
The REC button cannot be pressed.	The cassette erasure prevention tabs are broken.	• Replace the cassette with one whose tabs are intact. • Cover the erasure prevention hole with a double layer of adhesive tape (see page 12).
The level meter does not work.	• REC LEVEL control is set too low. • The amplifier is not delivering a recording signal (from the tuner, CD player, etc.). • Wrong connection, connection cord removed, poor contact, broken wire.	• Turn REC LEVEL control up. • Set the amplifier recording output selector correctly. • Check connections.
Immediately stops.	The tape is completely wound up.	Rewind the tape.
Cannot record	The head is dirty.	Clean the head (see page 13).

Symptom	Cause	Remedy
POOR SOUND QUALITY		
Unstable or interrupted sound	• The head, pinch rollers and capstans are dirty. • The tape is not uniformly wound.	• Clean the head, etc. (see page 13). • Completely fast-forward or rewind the tape.
No high frequencies	• A tape recorded without Dolby NR is being played back with DOLBY NR switch set to ON. • The head is dirty.	• Set DOLBY NR switch to OFF. • Clean the head (see page 13).
High frequencies are emphasized.	A tape recorded with Dolby B-type or C-type NR is being played back with DOLBY NR switch in the OFF position.	Set DOLBY NR switches to the same system (Dolby NR ON, B-type or C-type) used for recording.
Sound from previous recordings remains when re-recording a tape.	The head is dirty.	Clean the head (see page 13).
The sound is distorted.	• Recording level is too high. • The recorded signal itself is distorted. • The head is dirty.	• Turn REC LEVEL control down when recording. (see page 8). • Replace the cassette. • Clean the head (see page 13).
Too much noise	• A noisy tape is being used. • Incomplete insertion of a connection cord, poor contact. • Recording level is too low. • The head is dirty. • The head is magnetized.	• Replace the cassette. • Check connections. • Turn REC LEVEL control up when recording (see page 8). • Clean the head (see page 13). • Demagnetize with a head demagnetizer.
OTHERS		
Cannot use the remote control system CT-W430 (Australian and Multi-voltage models), CT-W330 (U.K., European and Multi-voltage models) are not provided with this system).	The control cord is not connected.	Connect the control cord.

SPECIFICATIONS

System ..... 4 track, 2-channel stereo
Heads ....."Hard Permalloy" recording/playback head ×1
"Hard Permalloy" playback head ×1
"Ferrite" erasing head ×1
Motor ..... DC servo motor ×2
Wow and Flutter .....
U.S., Canadian, Multi-voltage models
No more than 0.13% (WRMS)
U.K., European models ..... No more than ±0.19% (DIN)
(CT-W330)
Fast Winding time..... Approximately 100 seconds
(C-60 tape)

Frequency Response
—20 dB recording:
CT-W430
Normal tape ..... 35 to 16,000 Hz
Chrome tape ..... 35 to 17,000 Hz
Metal tape..... 35 to 17,000 Hz
CT-W330
Normal tape ..... 35 to 15,000 Hz
Chrome tape ..... 35 to 16,000 Hz
Metal tape..... 35 to 16,000 Hz
Signal-to-Noise Ratio
Dolby NR Systems OFF..... More than 56 dB

Noise Reduction Effect
Dolby B-type NR ON ..... More than 10 dB (at 5 kHz)
Dolby C-type NR ON ..... More than 19 dB (at 5 kHz)
Harmonic Distortion..... No more than 0.8% (0 dB)
Input (Sensitivity)
LINE (INPUT)..... 63 mV
(Input impedance 34 kΩ for CT-W430, 52 kΩ for CT-W330)
Output (Reference level)
LINE (OUTPUT) ..... 316 mV (Output impedance 7.7 kΩ)
PHONES ..... 45 mV (Load impedance 8 Ω)
(For CT-W330 U.K. and European models)

Subfunctions

- Relay playback
  CT-W430 (For all models) and CT-W330 (For U.S. and Canadian models only): DECK I ⇄ DECK II
  CT-W330 (For U.K., European and Multi-voltage models): DECK II → DECK I
- Synchronized copy start
- High-speed and normal-speed tape copying
  (DECK I → DECK II)
- Dolby B-type and C-type NR
- Auto tape selector (DECK I)
- 5 segments LED level meter
- Automatic stop function (Recording, Playback)
- Timer standby function
  (Unattended recording: DECK II)
  (Wake-up playback: DECK I and DECK II)
- 3-digit mechanical tape counter (DECK II)
- PHONES jack (For CT-W330 U.K. and European models)
- DOLBY HX PRO (CT-W430)
- Pause operation by Pioneer remote control unit with SR
  (U.S., Canadian models only)

Miscellaneous

Power Requirements
U.S., Canadian models ..... AC 120 Volts, 60Hz
European model ..... a.c. 220 Volts ~, 50/60Hz
U.K., Australian models..... a.c. 240 Volts ~, 50/60Hz
Other destination models (Multi voltage).....
AC 110V/120—127V/220V/240V (switchable), 50/60Hz
Power Consumption ..... 18 W
Dimensions..... 420 (W) ×120 (H) × 264 (D) mm
16-9/16 (W) ×4-3/4 (H) ×10-3/8 (D) in
Weight (without package) ..... 3.9 kg (8 lb 6 oz)

Accessories

Operating instructions..... 1
Connection cord with pin plugs 2
Remote control cord (U.S., Canadian models only)..... 1

NOTE:
Specifications and design subject to possible modifications without notice, due to improvements.

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